

CLAIMS

What is claimed is:

- 1 1. A method of managing an Emergency Services Call (ESC) within
2 a network while a party is engaged in an on-going call, wherein the network includes a
3 serving entity, an anchor entity, a Position Determination Entity (PDE), and an
4 Emergency Services Entity (ESE), and wherein the on-going call has been handed off
5 from the anchor entity to the serving entity, comprising the steps of:
6 receiving a request for the ESC at the serving entity;
7 receiving a request for a current location of the party at the PDE;
8 determining the current location of the party by the PDE;
9 receiving the current location of the party at the serving entity;
10 sending the current location to the anchor entity;
11 setting up the ESC between the anchor entity and the ESE; and
12 subsequently updating the anchor entity with the current location.
- 1 2. The method of Claim 1, wherein the step of receiving a request for
2 the ESC at the serving entity further includes the step of:
3 receiving a request for the ESC after the on-going call is placed on hold.

1 3. The method of Claim 1, wherein the serving entity includes a
2 Serving Mobile Switching Center (SMSC) and an associated Mobile Position Center
3 (SMPC), and wherein the step of receiving a request for a current location of the party at
4 the PDE further includes the steps of:

5 sending an ISPOSREQ message from the SMSC to the SMPC; and

6 sending a GPOSREQ from the SMPC to the PDE.

1 4. The method of Claim 1, wherein the serving entity includes a
2 Serving Mobile Switching Center (SMSC) and an associated Mobile Position Center
3 (SMPC), and wherein the step of receiving the current location of the party at the serving
4 entity further includes the steps of:

5 sending a gposreq response including the current location of the party
6 from the PDE to the SMPC; and

7 sending an isposreq response including the current location of the party
8 from the SMPC to the SMSC.

1 5. The method of Claim 1, wherein the serving entity includes a
2 Serving Mobile Switching Center (SMSC) and an associated Mobile Position Center
3 (SMPC), and wherein the step of sending the current location to the anchor entity further
4 includes the step of:

5 sending a FLASHREQ message including the current location from the
6 serving entity to the anchor entity.

1 6. The method of Claim 1, wherein the anchor entity includes an
2 Anchor Mobile Switching Center (AMSC) and an associated Mobile Position Center
3 (AMPC), and wherein the step of subsequently updating the anchor entity with the
4 current location further includes the step of:

5 sending a GPOSDIR message including the current location of the party
6 from the AMSC to the AMPC.

1 7. The method of Claim 1, wherein the ESE is an Emergency
2 Services Network Entity.

1 8. The method of Claim 1, wherein the party is a non-troubled party
2 engaged in the on-going call with a troubled party at a troubled
3 location, further including the steps of:

4 receiving a request for the troubled location at the PDE;
5 determining the troubled location of the troubled party by the PDE;
6 receiving the troubled location of the troubled party at the serving entity;

7 and

8 sending the troubled location to the anchor entity.

1 9. A network for managing an Emergency Services Call (ESC)
2 invoked by a party while the party is engaged in an on-going call that has been handed
3 off to serve the party at a current location, comprising:
4 an Anchor Entity for updating the current location subsequent to setting up
5 the ESC;
6 a Serving Entity in electronic communication with the Anchor Entity;
7 a Position Determining Entity (PDE) in electronic communication with the
8 Serving Entity; and
9 an Emergency Services Entity (ESE) in electronic communication with the
10 Anchor Entity.

1 10. The network of Claim 9, wherein the Serving Entity includes:
2 a Serving Mobile Switching Center (SMSC) in electronic communication
3 with the PDE; and
4 an associated Mobile Position Center (SMPC) in electronic
5 communication with the SMSC.

1 11. The network of Claim 9, wherein the Anchor Entity includes:
2 an Anchor Mobile Switching Center (AMSC) in electronic communication
3 with the Serving Entity; and
4 an associated Mobile Position Center (AMPC) in electronic
5 communication with the AMSC.

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12. The network of Claim 9, wherein the ESE is an Emergency
Services Network Entity.

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1 13. A method of managing an Emergency Services Call (ESC) within
2 a network while a non-troubled party is engaged in an on-going call with a troubled party
3 at a troubled location, wherein the network includes a serving entity, an anchor entity, a
4 Position Determination Entity (PDE), and an Emergency Services Entity (ESE), and
5 wherein the on-going call has been handed off from the anchor entity to the serving
6 entity, comprising the steps of:

7 receiving a request for the ESC at the serving entity;
8 receiving a request for the troubled location of the troubled party at the
9 PDE;
10 determining the troubled location of the troubled party by the PDE;
11 receiving the troubled location of the troubled party at the serving entity;
12 sending the troubled location to the anchor entity; and
13 setting up the ESC between the anchor entity and the ESE.

1 14. The method of Claim 13, wherein the request for the ESC includes
2 a special key code indicating that the troubled location will be determined by the PDE.